SECTION I

SUMMARY

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1.1 PROPONENT and PROJECT LOCATION

1.1.1 Proponent

The proposed *Greenbridge Redevelopment Plan* is sponsored by the King County Housing Authority, a municipal corporation.

1.1.2 Project Location

The project site is located in the White Center area of unincorporated King County. The 93.5 acre site extends roughly one-third of a mile in a north – south direction and two-thirds of a mile in an east-west direction. The project site is generally bounded by SW Roxbury Street on the north, 12th Avenue SW on the west, SW 102nd Street on the south and 2nd Ave on the east. The address of the property is 9900 – 8th Avenue SW. A legal description for the property is on file with King County Development and Environmental Services (DDES), as part of the subdivision application for this project (*File No L03P002).*

1.2 PROJECT OVERVIEW

The Proposed Master Plan would involve redevelopment and revitalization of the existing Park Lake Homes public housing community. The proposal would provide 900 to 1,100 (maximum) residential housing units which would include approximately 300 units to serve returning residents, and households from the KCHA waiting list that have the same economic profile. The Proposed Master Plan also contains 80,000 to 100,000 sq.ft. of community-oriented uses, which may include a branch library, community center, youth and family facilities, Head Start and child care facility, Sheriff's office, food bank, career development center, meeting/gathering space, and neighborhood-scale retail uses (approx. 22,300 sq.ft.). The Proposed Master Plan provides approximately 19.3 acres of landscaping, lawn, open space, and parks.

The Proposed Master Plan includes demolition of most or all existing buildings on-site and demolition, abandonment or replacement of existing infrastructure including streets, water lines, sanitary sewers, storm drainage and other utilities. Redevelopment would require vacation of existing public rights-of-way and public roadway easements associated with the existing streets and alleys and re-platting of the entire project site. The Proposed Master Plan would involve dedication of approximately 22.5 acres of right-of-way for public and/or private roads.

It is anticipated that the Proposed Master Plan would be developed in three stages commencing in 2004 and all stages would be completed by 2012. Development would involve staged relocation of all tenants.

1.3 BACKGROUND INFORMATION

1.3.1 Regulatory Overview

Existing Comprehensive Plan and Zoning Designations

The project site is located within King County's Urban Growth Area. The *Comprehensive Plan* designates the site Urban Residential at a density greater than 12 dwelling units per acre. The site is classified on the zoning map as R-18, Residential 12-48 dwelling units per acre (18 dwelling units per acre). The R-18 classification conditionally permits a broad range of housing types, as well as some limited non-residential uses.

King County Demonstration Ordinance (No. 14662)

The Proposed Master Plan has been planned and is being reviewed by King County DDES as a demonstration project pursuant to King County's Demonstration Ordinance No. 14662 (adopted in June 2003). The objectives of the demonstration ordinance are to: encourage innovative approaches to land development incorporating low-impact design and affordable housing. Greenbridge is one of three projects in the County that will apply "built green" and low impact design principles.

To achieve these objectives, the demonstration ordinance provides opportunities for flexibility regarding land uses, density, dimensional standards, road widths, drainage design, landscaping, parking and circulation, signs and environmentally sensitive areas. Modifications and waivers from code requirements may be considered by the applicable County department or hearing examiner in conjunction with review of the project application. Criteria for modifications or waivers are generally reducing housing costs without decreasing environmental protection. The proposed site plan incorporates a number of modifications and variances to County standards, as permitted by the ordinance. Other modifications and waivers may be identified by King County during the development review process.

1.3.2 Overview of King County Housing Authority Functions, Programs, and Project Planning

King County Housing Authority

The King County Housing Authority (KCHA) was created in 1939 and operates as an independent municipal corporation, pursuant to the State housing laws and the National Housing Act, to provide affordable housing and related services. KCHA is governed by a Board of Directors whose role includes setting policy for the agency, hiring the Executive Director of the housing authority, and approving an annual budget. KCHA's programs receive some of their financial support from the U.S. Department of Housing and Urban Development (HUD).

Park Lake Homes Community

The federal government authorized construction of Park Lake Homes in the early 1940's to provide temporary homes for defense workers and their families during World War II. The

development originally included 600 residential units in 300 buildings. Project design included elements of "new town" theories that began evolving in the late 1920's and 1930's, which included curved streets, short cul-de-sacs and open spaces that provided elements of a self-contained, planned community.

Today Park Lake Homes consists of 569 units of public housing in 329 buildings on the 93.5-acre site. All units are rental housing. The vast majority (98 percent) of residents are very low-income (50 percent or less of the area median income) and most (88 percent) are extremely-low income (30 percent or less of the area median income).

The Park Lake Homes campus also contains nine other buildings including a community facility, maintenance facilities, storage buildings, and former housing units that have been converted for community uses. A community facility houses the KCHA management offices, the Boys & Girls Club, a YWCA Career Development Center, Highline Community College classrooms, and a community room. Buildings that formerly served as housing have been converted to other supporting uses and community facilities to house the HOPE VI office, Sheriff's office, food bank, clothing exchange, store, and Neighborhood House.

Housing Opportunities for People Everywhere Program (HOPE VI)

The King County Housing Authority will redevelop Park Lake Homes through a HOPE VI grant from HUD. The HOPE VI program, begun in 1992, is directed toward replacing distressed and ineffective public housing with livable, sustainable communities.

Project Planning and Community Involvement

Planning in conjunction with the Proposed Master Plan has involved 80 meetings and workshops involving residents of Park Lake Homes and surrounding neighborhoods. This community involvement effort encouraged substantial and timely involvement by residents of Park Lake Homes, the White Center area, community groups and agencies.

1.3.3 Environmental Analysis and Review – SEPA and NEPA

The EIS has been prepared in compliance with the State Environmental Policy Act (SEPA), the State regulations that implement SEPA, and KCHA's regulations that implement the policies and procedures of SEPA. Greenbridge is funded through an authorization from the U.S. Department of Housing and Urban Development (HUD) and, therefore compliance with the National Environmental Policy Act (NEPA) is necessary. Compliance with the requirements of the National Historic Preservation Act (Section 106) and the Endangered Species Act (ESA) has been coordinated with NEPA review.

Preparation of the EIS is the responsibility of KCHA and King County Department of Development and Environmental Services (DDES). Both KCHA and DDES have directed the areas of research and analysis that were undertaken in preparing this Draft EIS and each has determined that the EIS has been prepared in a responsible manner using appropriate methodology.

The environmental elements that were analyzed in the Draft EIS were determined as a result of a formal, public EIS scoping process that occurred February 5, 2003 through March 7, 2003. Scoping notices were published pursuant to SEPA and NEPA requirements. A public EIS

scoping meeting was held within the community on February 26, 2003. This public meeting provided an opportunity for public comment, in addition to the submittal of written comments. Comments received were considered by the King County Housing Authority and King County DDES in determining the issues and alternatives that were analyzed in the Draft EIS. In addition to the Proposed Master Plan, two alternatives and 14 broad areas of environmental review were evaluated.

As noted in the *Fact Sheet*, the Draft EIS was circulated to agencies, organizations and individuals for a 45-day public comment period. This Final EIS incorporates refinements to the project since the Draft EIS was issued, revisions and clarifications to text contained in the Draft EIS in response to public comments, and responses to written comments (See sections III and IV of this Final EIS). The EIS is the environmental document that will accompany *Greenbridge* through the permit processes noted in the *Fact Sheet*.

1.4 PROJECT PURPOSE and NEED

Park Lake Homes has been identified by HUD as Severely Distressed Public Housing and KCHA has received a 35 million dollar HOPE VI grant for its revitalization. HOPE VI funding, based on KCHA's grant application, is conditioned on:

- redevelopment of the site;
- reducing the concentration of very low-income households living on the site; and
- creation of a mixed-income community.

The proposed project would involve redevelopment of the existing Park Lake Homes Community to provide housing, services and community facilities, amenities and infrastructure. As a result of an extensive analysis, review and input, directly involving the Park Lake Homes community, KCHA determined that an economically viable new Greenbridge, which accommodates varied programs and balances competing interests, requires 1,100 units. This is the maximum number of units that would be developed. KCHA would prefer to develop 900 units if ongoing analysis shows this density to be economically feasible.

1.5 PROJECT GOALS/OBJECTIVES

The following project goals were developed as part of the master planning process for the proposed project by stakeholders, including residents of Park Lake Homes and residents, business owners and social service providers within the surrounding community, in consultation with KCHA. They provide the framework for the Proposed Master Plan and the Design Alternative Master Plan that are described in sections 2.6 and 2.7 of this Final EIS.

- Reduce the over-concentration of very low-income households in the Park Lake community. Remove the stigma from public housing and integrate and disperse housing affordable to low-income families throughout the County.

- Replace existing substandard housing at Park Lake Homes Site I with durable, high-quality housing.

- Redevelop Park Lake as a mixed-income community, including homeownership opportunities.

- Reduce the physical and social distinction between the Park Lake community and the surrounding neighborhood. Create an improved network of parks, open space and pedestrian paths.

- Partner with King County, the Highline School District and neighborhood service providers to develop a new White Center Heights Community Elementary School.

- Work with the community and service providers to develop an expanded set of programs to promote education opportunities, community development and economic self-sufficiency and wage progression for Park Lake and residents of the surrounding community.

- Assist in the economic revitalization of the broader White Center community through an increase in the area's disposable income and new employment opportunities.

- Provide housing choice and assistance to current Park Lake residents in the relocation and redevelopment of Park Lake Homes.

- Develop a range of housing types to suit multiple needs including: seniors, residents with disabilities, large families, low to moderate income renters, and first-time homebuyers.

- Involve the community and residents in all phases of planning.

1.6 DESCRIPTION OF THE GREENBRIDGE PROPOSAL

1.6.1 Overview

The Proposed Master Plan would redevelop the site with a mix of urban density uses, integrated with new utilities and infrastructure, and a system of parks and open spaces. The community would provide a mix of housing types to meet the needs of a variety of income groups, including units for low-income residents. The Proposed Master Plan would also involve tenant relocation, building and infrastructure demolition as part of staged development. The following describes each of these components.

1.6.2 Housing

The Proposed Master Plan provides 900 to 1,100 rental and for sale housing units. All existing low income dwelling units would be replaced, either on-site or off-site. Rental housing could include attached townhouses, over/under flats, over/under townhouses, cottages, and apartments. For sale housing could include single family detached, cottages, attached townhouses, condominium flats and condominium townhouses.

While the financial analysis has not yet been completed, the EIS and other technical considerations associated with the Proposed Master Plan will determine the preferred number and mix of units necessary to ensure that the project is economically viable. The Draft EIS evaluated a range of 900 – 1,100 housing units. The plan currently includes 300 units as public housing for residents with incomes less than 80 percent of the area median; 200 – 400 units as a mix of workforce rental housing including market-rate rental housing and rental housing for households earning 50 – 60 percent of the area median income or below; and 200 – 400 for sale

housing units including a mix of first-time home buyer (with financial assistance) and market-rate housing. The housing program is still being developed and the precise mix of housing types would be determined by KCHA in response to market conditions.

Implementation of the Proposed Master Plan would require the demolition of all existing housing units. The HOPE VI Program requires that all residents receive relocation benefits. KCHA, with the extensive involvement of residents, has developed a detailed Relocation Plan that describes relocation benefits and choices.

1.6.3 Parks, Recreational Facilities, open Space and Community Facilities

The Proposed Master Plan would provide approximately 13 acres of parks and open space, including a community park, neighborhood parks, pocket parks, linear parks, trails and natural areas.

The Proposed Master Plan would also provide approximately 80,000 to 100,000 sq.ft. of community service, recreational and neighborhood retail uses either as free-standing buildings or a part of mixed-use development.

A preliminary plan for tree retention and replacement has been developed. Of the 832 trees on-site, approximately 662 trees would be removed and 170 existing trees would be preserved. Approximately 4,125 new trees would be added, including

- approximately 1,950 new street trees provided along all streets, alleys, in parking lots, in parks, in natural areas, and along trails within the development; and
- approximately 2,175 new trees planted within the project site including trees proximate to townhomes, cottages, over/under units and single family dwellings.

1.6.4 Circulation, Access and Parking

Major streets that would provide access to *Greenbridge* include: SW Roxbury Street, 4th Avenue SW, 8th Avenue SW, and SW 100th Street. An important design focus of the Proposed Master Plan is inclusion of principles of "new urbanism," including pedestrian orientation and transit support. It would contain a mix of uses and level of density that locates housing in proximity to neighborhood shopping/services and transit facilities to encourage pedestrian activity and decrease individual auto use. The Proposed Master Plan has a grid street pattern that would replace the existing curvilinear street configuration associated with Park Lake Homes.

All existing public rights-of-way and public roadway easements associated with the existing streets and alleys would be vacated and re-established through final plats. An estimated 27 acres of existing streets would be vacated together with other existing rights-of-way that were never constructed. The Proposed Master Plan involves dedication of approximately 22.5 acres of right-of-way to the County. A new "community neighborhood collector" is proposed. Narrower roads are intended to slow traffic and promote pedestrian circulation. The Proposed Master Plan would provide approximately 2,503 parking spaces, off-street and on-street. A certificate of transportation concurrency was issued by King County on August 7, 2003.

1.6.5 Stormwater and Utilities

The Proposed Master Plan involves replacement of all existing utilities on-site, including water, sanitary sewer, storm drainage, and electrical/telephone/cable. Availability of water and sewer have been verified by applicable service providers. Electrical and telecommunication cables may be placed underground. An integrated storm drainage plan would provide drainage and conveyance based on the amount of impervious coverage within each block area. The storm drainage plan incorporates "built green" and "low impact development" concepts to enhance stormwater control and reduce development-related impacts while still meeting the intent of the *King County Surface Water Design Manual*.

1.6.6 Clearing and Grading

The intent of the proposed grading plan is to minimize earthwork and take into account the following:

- modify several on-site roadways to increase stopping sight distance;
- minimize earthwork proximate to significant trees;
- match grade at the project boundaries, minimize grading in areas of steep slope and maintain existing grades of frontage streets;
- cut high points and fill low areas within the central portion of the site (near 5th Avenue SW) to create road-side biofiltration swales that slope to the south; and
- utilize building foundation walls to assist the stepping of site grades.

Total excavation during stages 1 through 3 would be approximately 73,000, 92,000, and 165,800 cubic yards respectively.

1.6.7 Tenant Relocation, Demolition, and Construction

Tenant relocation, demolition, and construction are planned in three stages, generally progressing from west to east. Stage 1 relocation would occur in 2004 (approximately 298 households), Stage 2 in 2005 (37 households), and Stage 3 relocation in 2006 (approximately 232 households). Any resident wanting to return to Greenbridge who remains in good standing with KCHA would be offered the opportunity to return.

Demolition and infrastructure construction would also occur in stages. Stage 1 would begin in 2005, Stage 2 in 2006, and Stage 3 in 2007. The Proposed Master Plan would be completed in approximately 2012.

1.7 ALTERNATIVES

1.7.1 Design Alternative Master Plan

While similar to the Proposed Master Plan, this alternative would be developed to be generally consistent with existing King County development requirements for the Urban Residential 12-48 du/ac (R-18) zone. Under the R-18 zone, the minimum density requirement would be 1,121 dwelling units. The maximum number of proposed dwelling units (1,100) would be 21 units (2 percent) less than the minimum required. The Design Alternative Master Plan would not incorporate built green or low impact design features. Similarly, based on zoning limitations for

the R-18 zone, it could not include the same variety of community and service uses, or retail uses.

Housing

Like the Proposed Master Plan, this alternative would provide approximately 900 - 1,100 dwelling units in essentially the same proportion (rental vs. for sale). Less variety of housing types, however, could be provided because a larger amount of site area would be devoted to infrastructure (e.g., rights-of-way, storm drainage facilities, etc.) resulting in less developable land.

Parks, Recreational Facilities, Open Space and Community Facilities

The Design Alternative Master Plan would provide less open space, parks (community park, neighborhood parks, pocket parks, linear parks), trails and natural areas, and more impervious surfaces than that associated with the Proposed Master Plan. The difference in the amount of pervious surfaces is primarily due to the Design Alternative Master Plan*'s* use of King County's roadway design standards, which in many cases require additional paving width.

The community center associated with this alternative would be approximately the same size (80,000 to 100,000 sq.ft.) as the Proposed Master Plan. However, based on restrictions in the R-18 zoning classification, there would be more limited retail and service uses. This alternative would result in the removal of all trees on-site and would result in fewer on-site trees than that associated with the Proposed Master Plan.

Circulation, Access and Parking

Like the Proposed Master Plan, the Design Alternative Master Plan would have a grid street pattern. Existing development regulations would require wider streets and more County-dedicated right-of-way with a larger amount of impervious surfaces.

Stormwater and Utilities

Like the Proposed Master Plan*,* the Design Alternative Master Plan would involve replacement of all existing utilities on-site, including water, sanitary sewer, storm drainage, electrical/telephone/cable. However, storm drainage would not incorporate provisions of the County's demonstration ordinance or built green/low impact design principles. It would comply with the Core Requirements of the *1998 King County Surface Water Design Manual* (KCSWDM). Storm drainage design would rely less on the reduction of impervious surfaces (with increased infiltration) and more on detention and water quality treatment facilities, which would be integrated into the open space network.

Clearing and Grading

The Design Alternative Master Plan would require more earthwork than that associated with the Proposed Master Plan – twice as much material would be excavated and twice as much fill material would be added.

Tenant Relocation, Demolition, and Construction

The Design Alternative Master Plan would be developed in three stages over an approximately 8-year period. Relocation would occur as with the Proposed Master Plan.

1.7.2 No Action Alternative

The No Action Alternative would involve no redevelopment of Park Lake Homes. The existing 569 public housing units would remain. The HUD HOPE VI grant that was awarded to KCHA is conditioned on redeveloping the site, reducing the number of very low-income households living on the site, and creating a mixed-income community.

While KCHA would continue to seek other funding sources, it is unlikely that adequate funds could be secured to sufficiently renovate existing facilities. Housing would continue to be maintained to the extent possible; however, deterioration and loss of housing over time would likely occur. No additional open space or community facilities would be provided. Existing infrastructure would remain. In addition, the street configuration would not be altered.

The No Action Alternative is included to meet the requirements of SEPA and NEPA. It would not meet any of the proponent's goals for this project.

1.8 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Potential Impacts and Mitigation Measures are summarized in **Tables 1.8-1** to **1.8-2** respectively.

Based on established SEPA/legal principles, required mitigation for impacts caused by a proposal must be reasonable, capable of being implemented, proportionate to the degree of impact caused by the proposed project, and based on policies which have been adopted as an approved basis for imposing mitigation under SEPA.

The transportation mitigation measures included in Table 1.8-2 (pages S-41 and S-42) are labeled “Proposed” and “Other Potential” measures. A distinction is also made between mitigation measures for “construction impacts” and “operation impacts.” “Proposed” mitigation measures represent commitments by the applicant to specific measures which mitigate identified significant impacts. “Other Potential” mitigation measures are additional measures that could be required at the discretion of the decision-maker or lead agency on subsequent development permits and approvals.

WAC 197-11-655(3)(b) notes that mitigation measures legally adopted by the lead agency “need not be identical to those discussed in the environmental document.” This allows the lead agency flexibility to revise or expand the mitigation measures presented in the EIS. It is often not possible to anticipate in an EIS every mitigation that will ultimately be required by the responsible agency with jurisdiction.

Table 1.8-1
SUMMARY OF IMPACTS

The following table briefly summarizes potential impacts of each alternative. Impacts of the alternatives are discussed in more detail in Section IV of the Draft EIS.

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
EARTH		
Construction Impacts Preliminary earthwork estimates indicate that approximately 123,300 cubic yards of cut and about 56,000 cubic yards of fill would occur on-site. Construction activities could increase erosion potential unless mitigated. Increased volume, rate, or duration of stormwater runoff could increase potential erosion in defined watercourses. Stream corridors or nearby waterbodies could also experience increased sedimentation during the construction period. Construction activities within or near the potential landslide hazard area in the eastern portion of the project site could potentially impact slope stability. Temporary, oversteepened cuts across or at the toes of slopes for road or utility trench construction could potentially result in shallow slope failures. Large cuts (10 to 15 feet) or fill embankments (over 10 feet) could result in slope destabilization, especially where loose or soft to medium stiff fill soils, shallow ground water or seepage are present. **Operation Impacts** The primary risk of erosion would be in areas where stormwater is concentrated and/or allowed to flow uncontrolled over erosion prone areas. Stormwater system design would generally address these potential impacts. Potential impacts could result from the headward (i.e., up and into the slope) regression of landslides toward residences and utilities; the frequency and the magnitude of any slope failures would govern possible effects. In the southeastern portion of the project site, a thick fill soil is present upslope of a rockery. Uncontrolled and concentrated runoff could reduce stability of slopes or cause erosion. In areas near steep slope areas, however, the proposed stormwater system would collect roof and roadway run-off	Earthwork and impacts would be similar to the Proposed Master Plan. However, more grading would occur and greater area would be disturbed. An embankment may be constructed to provide roadway connection between the southeastern and northeastern portions of the project site. The embankment may encroach on steep slope areas that would require a variance.	No redevelopment would occur and no earthwork activities would be performed. In general, construction impacts relating to erosion hazards, steep slopes, and landslide hazards would not occur. Drainage from existing homes' roofs would continue to flow onto the steep slope to the east. Existing structures are not built to current seismic code standards and could be more susceptible to damage from ground movement during a seismic event.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
and then discharge it downslope of steep slope areas. Leakage from stormwater control ponds or water quality ponds located near steep slopes could potentially affect the slopes. Lining stormwater control facilities and water quality facilities is recommended as a mitigation measure. Impacts from seismic events would be limited to areas underlain by artificial fill and saturated recessional outwash/ice contact deposits mapped in the low-lying area along the 8th Avenue S.W. corridor in the central portion of the site and landslide hazard areas. The primary impacts could consist of building or pavement settlement, buckling or damage to buried utilities, and possibly temporary loss of road access. A moderate risk of liquefaction exists in thin layers of fine to medium sands within the fill and ice-contact deposits in the vicinity of the community buildings. Landsliding could occur in the steep slope/landslide hazard areas along the eastern side of the project site during a seismic event. If not mitigated, areas of thick fill close to steep slope/landslide hazard areas (small areas in southeastern and western portion of site) may be susceptible to failure.		
AIR QUALITY		
Construction Impacts Dust from construction activities would contribute to ambient concentrations of suspended particulate matter. Construction would result in a potential for diesel engine exhaust to cause impacts at off-site locations. Some stages of construction would cause odors detectable to some people in the area (e.g., during paving operations using asphalt). Because it is highly probable that the existing structures that are to be demolished contain asbestos, contractors would have to comply with PSCAA's Regulation III, Section 4.05 (b), which outlines best practices for the handling of asbestos. **Operation Impacts** Off-site traffic-related air quality impacts would be the same as the No Action Alternative. Modeling results in 2012 indicate compliance	Air quality modeling results for 2012 are identical for the No Action Alternative and the Design Alternative Master Plan, and	By 2012, the calculated worst-case 1-hour CO concentrations at the examined intersections would be below

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
with the NAAQS; project generated traffic would not adversely impact air quality at the study intersection. No significant additional sources of air pollution (e.g., library, retail, social service uses, etc.), are anticipated.	would remain below the 1-hour NAAQS. Air quality at project-affected intersections would not be adversely affected by project-generated traffic.	the 35-ppm standard, and would comply with the 8-hour 9-ppm standard.
WATER RESOURCES		
Construction Impacts Earthwork could intersect shallow perched groundwater. Short-term impacts could result in reduced run-off because water would infiltrate more quickly. Dewatering activities in trenches and other excavations that encounter seeps or groundwater could result in a temporary increase in discharge to storm drainage systems and/or to surface water bodies. A shallow water table will likely be encountered in fill soil and ice-contact/recessional deposits in low-lying areas in the vicinity of 8th Avenue SW. Small seeps may be encountered in gravel or sandy layers within the glacial till during mass grading. Seeps may also be encountered in the thin soil horizon above in-situ glacial till during winter or following periods of extended precipitation. Mass grading could adversely affect the seasonally perched water table through stripping of the permeable soils or by compacting to reduce pore space and permeability. Recharge to the deeper aquifers could be reduced slightly. Construction activities could impair the quality of off-site surface water bodies such as Duwamish River and Salmon Creek. Other impacts to surface water quality could occur from a spill of fuels or other fluids used for construction equipment. **Operation Impacts** **Surface Water:** Increased impervious surface areas would result in an increased amount of surface water runoff and a decrease in groundwater recharge. However, proposed bioswales would likely offset, at least partially, the added impervious area. Storm water runoff from an 11-acre area the Salmon Creek Basin would be diverted to the North Fork of Hamm Creek. This would increase the on-site area in the Hamm Creek Basin from approximately 43 to 54	Impacts would be similar to the Proposed Master Plan. The stormwater pond in the Lake Garrett basin could intersect groundwater, depending upon final size and depth of the excavation. The stormwater control facilities would use KCSWD standards for design of facilities and would not incorporate principles and design elements allowed under the Demonstration Ordinance. As a result, stormwater control facilities for Lake Garrett and Mallard Lake sub-basins would be 264 percent and 176 percent larger, respectively. If unlined, the Lake Garrett sub-basin LG-1 stormwater facility would be impacted if groundwater elevations rise, decreasing the capacity of the facility to accept and control run-off water. If unlined, water could seep into the ground from stormwater control and water quality ponds located near sensitive slopes or erosion hazard areas. Built green and low impact design principles, such as biofiltration swales and routing of roof-run-off to perforated stub-outs, would not be used. Partial recharge to the perched groundwater would not occur and shallow groundwater flow (interflow) could be affected. The water quality facilities would be designed	No new impacts to surface water or groundwater would result. Poor drainage would continue to occur in the central portion of the site that reportedly results in water ponding in the vicinity of the community center. Stormwater run-off would continue to be untreated prior to discharge to local drainage systems and waterbodies. Erosion would continue to occur where stormwater run-off flows onto erosion hazard areas.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
acres, or from approximately three percent to four percent of the overall basin. This would reduce the on-site portion of the Salmon Creek basin from approximately 47 to 36 acres, or from approximately four percent to three percent of the entire basin. Stormwater control facilities, if needed, would be sized so that developed peak flows and durations for most storm events will be equal to or less than existing conditions. Since peak flows would be controlled, significant adverse impacts from the planned diversion to Hamm Creek are not likely. However, a minor increase in non-peak flow rates during periods of upstream adult migration may facilitate upstream fish passage. **Ground Water:** Natural recharge to groundwater is expected to decrease slightly following redevelopment as a result of the increase in effective impervious area, mass grading, and potentially due to drainage of shallow subsurface water along cuts and trenches. This would be partially offset by infiltration that would occur in proposed biofiltration swales that collect run-off from roofs. **Water Quality:** If untreated, surface water run-off could affect downstream receiving waters. In general, runoff would be treated and would be cleaner than under existing conditions. This would also result in improved water quality to downstream receiving waters. Potential impacts to water quality could occur from discharge of stormwater onto erosion hazard areas, steep slopes or landslide hazard areas. Overflow from stormwater facilities could also result in erosion if not managed properly. Infiltration from stormwater facilities located near steep slopes or landslide hazard areas would result in seeps emerging on or near potentially sensitive slopes.	according to KCSWD standards and would be larger than for the proposal.	
PLANTS and ANIMALS		
Construction Impacts Clearing and grading of the portions of the project site identified as Urban (U), moderately vegetated habitat would occur. A majority of the existing trees would be removed. Some trees would be retained and a large number of new trees would be planted. Lawns and other landscape vegetation would be established along streets and among buildings.	Impacts to plant and animal habitat would be similar to the Proposed Master Plan. However, more existing trees may be removed. The landscaped and developed open space areas would likely cover less area than the Proposed Master Plan due to additional infrastructure requirements (e.g.,	The process of natural forest development (succession) would continue to occur in the existing natural open space areas. The small areas of forest and shrubland areas would continue to grow and develop into forests of varying mixes of Douglas fir

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Clearing, grading, and construction activities would remove habitat temporarily for some species, many of which are non-native, invasive species. As new site landscaping becomes established, habitat for these species would again be provided. The primary loss of shelter or cover would be removal of many of the larger trees (both ornamental and native species) that occur on site. If the deciduous forest on the slopes along the western boundary of the project site were removed, native deciduous forest cover habitat would be eliminated. Removal of this forest cover could also eliminate some animal species from the project site. **Operation Impacts** Quality of stormwater runoff to the Salmon Creek 1 wetland may improve, as no water quality treatment is provided under current conditions. Over time, the Proposed Master Plan would provide similar habitat to what currently exists, which is suited primarily to urban-adapted species. The potential for human disturbance of retained natural habitats would increase due to a larger on-site population. However, the area of human activity would remain essentially the same as under existing conditions.	road rights-of-way, stormwater facilities).	(and other scattered conifers) and deciduous trees.
FISH RESOURCES		
Construction Impacts Impacts to fish and fish habitat would be related to the amount and type of earth exposed during construction, the effectiveness of temporary erosion and sedimentation control measures, and the extent and effectiveness of flow control measures from temporary ponds. These would affect the amount, quality, and timing of potentially silt-laden water reaching downstream areas of fish habitat. **Operation Impacts** Following water quality treatment and flow attenuation due to detention, storm runoff from on-site in the North Fork Hamm Creek drainage may either be discharged to near the head of a small on-site ravine, as it is presently, or it may be piped directly to an existing piped drainage system. As described previously, the head of the small ravine may contain a short, Class 3 stream section and a Class 3 wetland. If the existing stormwater discharge location to the ravine	Impacts would be similar to the Proposed Master Plan. However, the Design Alternative Master Plan would comply with the current KCSWDM Core Requirement to discharge stormwater at the natural location. The North Fork of Hamm Creek would only receive runoff from its original and current drainage basin. Similar to the Proposed Master Plan, redevelopment would improve water quality and attenuate runoff flow fluctuations compared with the existing site conditions.	Stormwater runoff would continue to flow from the site into both the Salmon Creek and Hamm Creek Basins in a relatively uncontrolled and degraded state to the detriment of fish and fish habitat downstream. The benefits to downstream fish and fish habitat of improved water quality and water quantity controls would not occur.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
sideslope is maintained, it could result in some continued erosion, but presumably less than would occur under existing conditions (the No Action Alternative) since the Proposed Master Plan would attenuate storm runoff flow fluctuations by providing detention. If piped directly to the existing piped drainage system, some potential erosion may be avoided and the Class 3 stream section and Class 3 wetland area, if present in the upper ravine area, would be bypassed. Some stormwater from off-site to the south also enters the ravine, which may be sufficient to maintain the stream section and wetland area, if present. The Proposed Master Plan would significantly improve water quality and attenuate runoff flow fluctuations compared with existing site conditions. The NOAA Fisheries response letters concur with the Biological Evaluation determination of "may affect, but not likely to adversely affect" for Puget Sound chinook salmon (Oncorhynchus tshawytscha), which is listed as ESA "threatened" species. The NOAA response letter also states that because the habitat requirements for the MSA managed species are similar to that of ESA listed species, and because the conservation measures that the DDES included as part of the proposed action to address ESA concerns are also adequate to avoid, minimize or otherwise offset potential adverse effects to designated Essential Fish Habitat, conservation recommendations pursuant to MSA are not necessary. The U.S. Fish and Wildlife Service (USFWS) concurs with the Biological Evaluation determination of "may affect, but not likely to adversely affect" for buill trout (*Salvelinus confluentus*) and bad eagles *(Haliaeetus leucocephalus*). The USFWS concurrence is based on adherence to the special conditions, Best Management Practices, Low Impact Development techniques, and conservation measures included in the BE.		
ENERGY USE		
Construction Impacts During demolition and construction, energy would be required to demolish and build housing units, community uses, and associated landscaping, utilities, and infrastructure. Activities that would consume energy include the manufacture of construction materials, transportation of construction materials to and from the construction	Energy requirements for demolition and construction activities would be similar to those described for the Proposed Master Plan. However, "built green" or low-impact design would not be implemented and use	Demolition and construction activities would not take place and associated energy consumption would not occur. Energy use would continue at existing levels. Energy inefficient conditions

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
site, and operation of machinery during demolition and construction. **Operation Impacts** Electricity use would increase relative to the increase in the number of dwelling units and building area of non-residential uses. Demand would be determined based on the allocation of electricity and gas energy to specific uses within a building (i.e., for cooking, heating), laundry). Electricity use per unit would vary, depending on the size and number of bedrooms in each unit. Existing capacity at the Duwamish Substation is sufficient to accommodate the incremental increase in electricity demand that would result from the proposed project.	of recycled building materials, eco-friendly building techniques, and energy conservation would not be promoted. A larger portion of the site would be devoted to infrastructure (i.e., rights-of-way, storm drainage facilities), incrementally increasing the amount of energy required for development, maintenance and operation. Fewer energy conservation features would result in increased demand for energy.	would continue at on-site buildings.
NOISE		
Construction Impacts Temporary increased sound levels would occur along access roads to the project site and near on-site construction areas due to the use of heavy equipment and the hauling of construction materials. Increased noise levels would depend on the type of equipment being used, and the amount of time it is in use. Demolition and construction would occur in three stages and would begin at the west end of the project site and move east. Construction noise would be a concern for adjacent on-site and nearby off-site residential receivers during both the demolition and construction of the various stages of the project. **Operation Impacts** Truck loading docks, rooftop heating, ventilation and air conditioning (HVAC) units, or other equipment could potentially generate significant noise. Based on typical operational impacts for the type of facilities identified in the Proposed Master Plan, it is not expected that noise levels would exceed King County code requirements. Increased residential and non-residential development on the project site would result in increases in traffic on nearby off-site roadways. These increases in traffic volumes could increase traffic noise levels at off-site receivers adjacent to the affected roadways. SW Roxbury	Additional traffic volumes and increased residential and non-residential uses would be similar to the Proposed Master Plan. Therefore, nearly identical noise levels would be experienced and noise impacts would also be similar.	Existing traffic noise levels exceed HUD noise criteria. No significant increases in traffic noise, construction noise, or other noise source impacts would occur at existing residences. Exterior noise levels would be the same as the Proposed Master Plan. Along SW Roxbury Street, traffic noise would be approximately the same as existing conditions. Traffic noise along SW 100th Street would be 1-2 dBA over existing conditions.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Street and SW 100th Street would experience the largest increases in traffic volumes as a direct result of the proposed project. Existing afternoon peak-hour noise levels along SW Roxbury Street are currently above what King County, WSDOT or the City of Seattle would consider acceptable for residential areas and would remain above these levels with or without the proposed project. Traffic noise is not subject to these jurisdictions' requirements. The only significant source of off-site noise is traffic along SW Roxbury Street. Although 2012 traffic volumes are expected to increase along SW Roxbury Street (with or without the project), the increase in traffic volumes is relatively small, and the resulting 2012 Ldn would remain unchanged from existing levels. Sound level measurements taken on-site south of SW Roxbury Street indicate that second-row receivers (those located behind first-row receivers, away from the traffic source) would experience traffic noise levels considered "acceptable" by HUD (below 65 dBA). Private outdoor use areas associated with residential units would be located adjacent to SW Roxbury. Two parks are also proposed adjacent to SW Roxbury. Users of these areas would be exposed to "normally unacceptable" noise levels, based on HUD criteria (above 6SdBa), created by traffic along SW Roxbury Street with or without the proposal. Sound levels at buildings abutting this street also currently exceed the HUD noise criteria and would continue to exceed these criteria in the future with the Proposed Master Plan, Design Alternative Master Plan, or No Action Alternative.		
ENVIRONMENTAL HEALTH		
Construction Impacts Demolition activities could expose some Recognized Environmental Conditions (RECs), as identified in the Phase I Environmental Site Assessment (ESA). **Operation Impacts** Off-site potential contaminant sources may continue to pose a low risk to the site from migration of contaminants. Lead and/or arsenic	Impacts to environmental health conditions would be the same as the Proposed Master Plan.	Existing buildings and infrastructure would remain. Asbestos-containing materials would remain and could pose a health risk, particularly if disturbed. Potential impacts could occur, particularly to children, where lead-based paints are present in significant

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
in soil may also pose a low risk, particularly to children. The potential for contaminants in existing fill used for the Wiley Community Center and in the demolition debris in the eastern side of the site is considered low.		concentrations. Lead in soil derived from lead-based paint on structures could also present health risks. Lead or arsenic in soil resulting from downwind fallout from the Asarco smelter may also present potential impacts, primarily to children.
LAND USE and SOCIOECONOMICS		
Land Use		
Construction Impacts Impacts to adjacent land uses during construction would include dust, vehicle emissions and noise. Short-term access interference could occur for adjacent residents and businesses. **Operation Impacts** The relative mix of land uses would not change significantly. The amount of building area (building footprint) on the site would increase slightly relative to existing conditions (from 19 percent to 20 percent) and the amount of area in lawn/landscape/open space would decrease slightly. Open space would be distributed throughout the site – the largest single open space area would be located in the eastern portion of the site in the approximately 6-acre wooded hillside. With the proposed street vacations and reconfigured street system, the amount of site area dedicated to streets, roads, driveways and parking would also decrease. On-site population and employment would increase, as would the overall level of human activity. The quality of urban design would improve significantly, and the character and appearance of the site would be transformed in a positive manner. Proposed land uses would be consistent with the adopted Comprehensive Plan designation for the site and compatible with those typically located in urban neighborhoods. The project site would be more intensively developed than at present – the number of housing units and amount of non-residential space would increase significantly. New buildings would be larger than	Land use impacts would be similar to the Proposed Master Plan. However, existing zoning (without application of the flexibility permitted by the Demonstration Ordinance) may not permit the full range of non-residential uses assumed for the Design Alternative Master Plan. Construction of 900 to 1.100 dwelling units would not be consistent with the zoning code's minimum density requirement (1,127 units).	The existing 569 public housing units, community facilities, and utilities would remain. No demolition of existing structures or redevelopment would occur. Land use impacts associated with increased residential density and the proposed community and neighborhood retail facilities would not occur. Positive land use aspects of locating community facilities (e.g., library) in close proximity to residential uses would not occur.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
what currently exist on or adjacent to the site. Residential density on-site would increase relative to existing development, currently approximately 6 dwelling units per gross acre. Gross densities would be approximately 10-12 dwelling units per acre. The demand created by the more varied income levels of Greenbridge's larger population could create some pressure for redevelopment or expansion of existing commercial uses within White Center. Some pressure for redevelopment could occur for existing residential uses located adjacent to the Greenbridge site.		
Socioeconomics		
Construction Impacts Construction impacts to employment, wages, and income would be positive. Approximately $117.6 million in direct income would be generated, with approximately 2,524 person/years of construction employment over the estimated 8-year redevelopment of the project (from 2004 to 2012). Direct project construction employment could indirectly increase the number of construction-related jobs in the surrounding area. Approximately $124.5 million would be spent on construction including lumber, cement, tools, and other products. Businesses selling construction materials would benefit through increased revenues; employment could also increase in order to meet the increase in demand for goods. Relocation of residents during staged construction could result in reduced revenues to area merchants, as well as temporary disruption to the lives of residents. Spending from the temporary influx of construction workers could offset all or part of this reduction in local business revenues. Positive impacts could include an increase in local hiring, expansion of businesses, new business formation, and greater local tax	Impacts would be similar to the Design Alternative Master Plan. However, hard construction costs are estimated at approximately $237.8 million, which is approximately $2.6 million more than the Proposed Master Plan. Labor costs would generate an estimated $118.9 million in direct income and 2,551 person/years of construction activity (27 more jobs than the Proposed Master Plan).	The population on-site would remain unchanged; the existing demographic, income and household characteristics would continue. Low-income households would remain concentrated on the project site without improvements to housing conditions or increased efforts toward assisting residents with job training and other social support. Economic conditions in the immediate area would remain unchanged.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
revenues. **Operation Impacts** Population on-site would increase from 1,656 residents (in 569 units) to a range of 2,313 to 2,832 residents (in 900 to 1,100 units). An increase in higher-income households and the introduction of market-rate housing for owners would occur. The number of units available on-site to low-income households would decrease; some housing would be replaced off-site. Together, these changes would alter the socioeconomic dynamics and demographics of the community and surrounding neighborhood. Middle-income residents attracted to the market-rate for-sale and rental units proposed for the site, would reduce the percentage of low-income residents. The increase in housing types could tend to economically diversify the community over what currently exists. The number of residents aged 17 years and younger (currently 40.3 percent) would likely decrease, while the number of residents aged 18 years and older would increase. The age distribution within Greenbridge would reflect the surrounding area to a greater extent. Employment (FTE) is estimated to increase by at least 21.5 jobs (FTE), in addition to existing on site employment. The average annual income of residents is estimated to increase as a result of the shift from all public housing units to a mix of public housing, market-rate rentals, and for-sale units. Increased income levels and increased spending by Greenbridge residents could result in a positive impact on area business and local tax revenues. Relocation of existing residents could result in temporary or permanent stresses to their social activities and/or affiliations.		
HOUSING		
All of the existing residential structures would be demolished, necessitating relocation of all current residents. The 569 existing public housing units would be replaced with units of comparable affordability. A total of 300 units with rents affordable to households with as little as 0 percent of the median income will be replaced on-	Impacts would be the same as the Proposed Master Plan.	Continued deterioration of the housing units would occur due to their age, construction quality, and the limited availability of funding for repair and rehabilitation. Loss of $35 million of

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
site through either the Low Income Public Housing Program or through the use of project-based Vouchers. KCHA would replace 269 units off-site by allocating project-based Vouchers to either existing KCHA-owned, or managed, rental units or to new units developed by KCHA or another nonprofit, low-income housing development agency. The number of units on the site would increase from the current 569 units to between 900 and 1,100 units (increase of between 58 percent and 93 percent). A more diverse mix of structure types would also result. The number of rental units on the site would increase (by 31 to 131 units). One third of the 900 new units (300 units) would be for sale to first-time and repeat homebuyers. Slightly more than one third (400 units, 36 percent) of the 1,100 units would be for sale. The creation of a mixed income community would partially alleviate the social issues that have historically affected the community.		HOPE VI funding could be experienced by KCHA. Loss of the opportunity to achieve revitalization of a distressed community, to expand the housing options (both quality and location of housing) for low-income households, and to increase homeownership opportunities in the area would also occur.
ENVIRONMENTAL JUSTICE		
Construction Impacts All residents would need to be relocated from the project site to accommodate demolition and construction. All relocated residents would incur moving costs and the inconvenience associated with relocating from their homes and finding comparably affordable housing. **Operation Impacts** Community cohesion would be affected through changes in the existing demographics. Reducing the concentration of extremely low-income and very low-income households on the site, and thereby reducing or eliminating some of the social consequences of such concentrations, would be considered a desirable impact. Opportunities for economic diversification of the community would be created, while still providing for the housing needs of those public housing residents. Demolition of the current structures would eliminate potential	The impacts would be the same as the Proposed Master Plan.	No related impacts on the minority and low-income populations living on the site would occur. However, the existing housing conditions or the standard of living would not be improved for current or future residents. The community would continue as a concentration of extremely low- and very low-income households, challenged by the existing social, economic, and physical barriers that separate them from full integration with the surrounding community. Residents would continue to experience the poor condition of the housing units, given that adequate resources to make significant improvement would not be

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
exposure to the lead-based paint and asbestos that currently exist. Any residents on-site when demolition and construction occurs would not be disproportionately exposed to hazardous materials or public health hazards since removal of any hazardous materials must comply with current regulations for abatement and/or disposition of such substances.		available. As the structures and infrastructure continue to deteriorate, the risk increases that all residents would eventually be displaced due to their substandard condition and/or the failure of on-site utility systems.
HISTORIC and CULTURAL RESOURCES		
A moderate possibility exists for buried archeological deposits, particularly prehistoric remains, to be unearthed. However, previous site disturbances have severely diminished the likelihood of discovery.	Impacts would be the same as the Proposed Master Plan.	No impacts to historical or archaeological resources would occur. The potential for discovery of historic or cultural artifacts would also not occur..
AESTHETICS, LIGHT and GLARE		
Construction Impacts Demolition and construction activities, including site clearing and grading, would be most visible from nearby off-site residences and on-site residents east of 8th Avenue SW. **Operation Impacts** Changes to community character would be primarily related to an increased number of structures with greater intensity, bulk, scale, and height, with interspersed landscaping and open space. Most viewers would likely perceive the change from an older public housing development to a revitalized mixed-use community as a positive change and visual improvement. Improved visual quality on-site could exert a positive influence on nearby neighborhoods and the White Center area. However, some viewers could consider the intensification of buildings on-site as adverse. Light from streetlights, parking lots, vehicle headlights, and buildings would increase with the increased number of residences. Glare could occur primarily from larger scale buildings along the east side of 8th Avenue SW.	Impacts on visual quality would be similar to the Proposed Master Plan. However, more garages would front onto streets, blocks would be longer, and there would be less efficient utilization of space. The open space strategy does not include the hierarchy of parks and trails to visually link the variety of residence types (detached, townhomes, and apartments). Retention of the existing street system would not allow for the large open space opportunities afforded under the Proposed Master Plan. Fewer landscaped buffer areas would be provided on-site. However, more perimeter buffers would be required. These changes would result in less visual continuity and unification of project elements.	The visual quality of the project site would continue to deteriorate. Aesthetic improvements would not occur and new view opportunities would not be created.
PARKS and RECREATION		
Construction Impacts Most existing residences, infrastructure, trees, and onsite recreational	Impacts would be similar to the Proposed	Residents would not benefit from new

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
resources, including the community pea patch, would be demolished. During this period, use of nearby off-site parks and recreational resources could temporarily increase because on-site facilities would not be available. At the same time, the on-site population would be relocated during construction, so demand could decrease. **Operation Impacts** The need for on-site recreational space and facilities would increase. Use of off-site resources would also increase. The proposed recreational space total is 6.2 acres which exceeds King County Code requirements. Under the Proposed Master Plan, the minimum requirement for 1,100 units is 44 recreational facilities. Recreational facilities at the Wiley Community Center and the new elementary school are assumed to be available to Greenbridge residents and would help meet King County's requirements for recreational facilities. The new school would provide approximately 20 recreational facilities. The Proposed Master Plan would meet or exceed code requirements for recreation space for leisure, play, and sport activities. Code requirements for required recreational facilities (play equipment/areas) would also be met. Compared with existing conditions, recreational space and facilities would be more widely distributed and feature a greater variety of amenities. The street layout would make open spaces more accessible to residents and surrounding neighborhoods. Sidewalks and trails would provide a variety of opportunities for residents to reach parks and recreational resources including the community center.	Master Plan. However, the Design Alternative Master Plan would provide approximately two acres less dedicated recreational resources lacks the comprehensive parks and open space strategy of the Proposed Master Plan.	and improved on-site parks and recreational resources.
PUBLIC SERVICES and UTILITIES		
Construction Impacts **Fire and Emergency Medical Service:** Construction impacts could include increased calls for service related to construction-related injuries. **Police Service:** The King County Sheriff's Office (KCSO) could experience an increase in calls for service related to construction site theft, vandalism, or trespassing. The need for police response would depend on the implementation of security measures during	Impacts would be similar to the Proposed Master Plan. Landscaped areas would be greater than the Proposed Maser Plan by approximately 62,600 square feet, requiring additional water for irrigation (estimated 3,200 gpd).	No impacts to public services and utilities would occur. Existing services would continue through the existing infrastructure. The sewer system would remain inadequate, according to King County design standards.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
construction, which could include fencing, signage, lighting, and security patrols. **Community Services:** Existing services would continue in temporary, on-site locations, some of which could operate at reduced levels, depending on the extent of construction and/or demand for the service. **Schools:** Students residing on-site who attend school in the area will continue enrollment at their respective schools. Relocating students could affect enrollment in other districts (i.e., Seattle School District) to a small degree. **Utilities:** New water and sewer mains would be installed in the dedicated public right-of ways and would connect with the existing distribution network. Construction of the storm drainage system would incorporate elements of the 1998 KCSWDM and Built Green and Low Impact Development (LID) design principals. **Operation Impacts** **Fire/Emergency Medical Service:** The proposed increase in housing units and corresponding population would increase demand for fire and emergency medical services. The net increase or decrease in emergency is expected to be negligible. North Highline Fire District's (NHFD) Class 3 rating would result in lower fire insurance rates for Greenbridge residents, community service providers, and commercial uses. In addition, the increased number of housing units and potential for higher property values would benefit the District's revenue/taxing capacity. **Police Service:** There would likely be an increase in service calls due to the increase in population. The proposed project could also increase demand for police-sponsored community programs. **Community Services:** Impacts to community services are anticipated to be positive. Development of the Proposed Master Plan would enhance and increase community programs and services provided on-site. Facilities and infrastructure improvements would be		

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
expected to improve serviceability to program and service users. **Schools:** Approximately 403 new students would be added to the Highline School District. **Utilities:** The total water demand for residential and irrigation uses is estimated at 299,500 gallons per day (gpd) with 900 housing units and 351,400 gpd with 1,100 units. In the event of a fire, fire flows for larger buildings are estimated to require between 4,000 gallons per minute (gpm) and 2,500 gpm. The total wastewater flows under the Proposed Master Plan would be slightly greater than the residential and irrigation water demand. Application of "built green" techniques would encourage the use of natural drainage systems Additional telecommunications service would be required to meet the increase in demand from both residential and non-residential uses.		
TRANSPORTATION and PARKING		
Construction Impacts During construction, vehicle trips would be generated by delivery of construction materials and equipment, removal of demolition debris and soils and transporting construction workers to and from the site. Demolition and excavation of the existing facilities would result in some short-term traffic impacts to the surrounding area. Building demolition is expected to last approximately 2-3 months and would require exporting a total of 600 to 800 loads of debris. The most noticeable impacts related to the anticipated demolition/construction effort would be in the form of truck hauling trips, heavy equipment traffic levels, and street closures or detours. The majority of truck trips would occur in the first year of each construction phase. Trucks would be directed towards the major arterials and regional routes as directly as possible. **Operation Impacts** One intersection level of service is expected to degrade in 2012: 8th Avenue SW/SW Roxbury Street would degrade from LOS B to C in the PM peak hour, with a 100-percent increase in average delay per vehicle. Generally, with the exception of the intersection at Highland Park Way SW/SW Holden Street, the intersection analysis indicates	**Construction Impacts** During construction, the portions of 8th Avenue SW and SW 100th Street that run internal to the site would require temporary closure. Additionally, limited modifications to other streets adjacent to the project may result in short-term impacts to these streets. Impacts would be the same as described for the Proposed Master Plan. Because the Design Alternative Master Plan assumes major realignment of the existing street system and regarding, more than twice the amount of soil will need to be cut and excavated from the site, and more than twice the fill material would need to be imported to the project site than with the Proposed Master Plan. The duration of the hauling activities could last nearly twice as long as that for the Proposed Master Plan.	Some intersection levels of service during the AM and PM peak hours are expected to degrade in 2012 from existing conditions. At most intersections, a slight increase in delay is expected as a result of background traffic growth and the addition of pipeline project traffic. Two intersections would degrade from existing conditions in the AM peak hour, while three intersections would degrade in the PM peak hour. Future improvements to transit service are planned within the study area by 2012. In addition, the proposed future expansion of the monorail system could include expansion to West Seattle, a possible transfer opportunity for study area residents. In addition, Sound

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
that there is more than enough capacity to accommodate the proposed redevelopment and background growth in traffic in the vicinity of the site. The largest increase in average delay per vehicle is expected at Highland Park Way SW/SW Holden Street, where an average delay increase of 47 seconds is expected in the PM peak hour. An increase of 39 seconds is expected in the AM peak hour. At all other study intersections, a slight increase in delay is expected as a result of project traffic. The zone in which the project site is located is currently "green" on the County's concurrency map. Therefore, it is forecast that the adjacent roadway network can accommodate the additional traffic generated by the proposed project. King County issued a Concurrency Certificate for Greenbridge In August 2003. Overall, the improved services planned by King County Metro Transit and Sound Transit are expected to accommodate any increase in ridership that would result from the Proposed Mater Plan. Therefore, these additional trips would not create a significant adverse impact to transit operations in the area. Improved intersection alignments would provide more identifiable roadway intersections and crosswalks, allowing safer crossing for pedestrians at more regular intervals. Proposed traffic calming measures would contribute to slowing vehicular traffic, which would help accommodate non-motorized (pedestrian and bicycle) trips. Outside Greenbridge, existing non-motorized facilities within the study area are sufficient to accommodate the Proposed Master Plan trip generation that would access the site via pedestrian or bicycle facilities. Thus, no significant adverse impacts to non-motorized facilities or operations are expected to occur. There would be a slight increase in the potential for traffic accidents at study intersections, proportionate to the increase in traffic from the Proposed Master Plan (2 to 16-percent during the AM and PM peak hours).	**Operation Impacts** Due to the close proximity of 8th Avenue SW/SW Roxbury Street, 8th Avenue SW/SW 100th Street, and 4th Avenue SW/SW 100th Street to the project site, these intersections would experience the greatest traffic impact during the AM peak hour (7 to 12-percent). Similarly, during the PM peak hour, these three intersections would also experience the greatest traffic impact, as 7 to 12-percent of total entering traffic volumes would be attributable to site-generated traffic. With the exception of 8th Avenue SW/SW 100th Street and 4th Avenue SW/SW 100th Street, all intersections would generate an impact of less than 10 percent during both the AM and PM peak hours. No intersection levels of service are expected to degrade in 2012. During the PM peak hour, average delay at 8th Avenue SW/SW Roxbury Street would increase by approximately nine seconds per vehicle. At all other study intersections, a slight increase in delay is expected as a result of the addition of project traffic. The zone in which the project site is located is currently "green" on the County's concurrency map. Therefore, it is forecast that the adjacent roadway network can accommodate the additional traffic generated by the proposed project and King County issued a Concurrency Certificate for Greenbridge in August 2003. Existing and future transit service would	Transit and Metro both have route and facility adjustments planned in the future. No significant change in non-motorized operation is expected to occur within the project vicinity. By 2012, there would be a slight increase in the potential for traffic accidents at study intersections proportionate to the increase in traffic due to traffic growth in the area. Future on- and off-site parking supply is expected to remain consistent with the existing supply documented in the *Affected Environment* section of the Draft EIS. Also, changes to on-street parking in the area are not anticipated.

Table 1.8-1
SUMMARY OF IMPACTS (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
The proposed parking supply (2,503 spaces) would meet the anticipated parking demand. Furthermore, mid-day parking utilization observations indicate that the low-income residential demand declines to 0.63 per occupied unit. This is significantly less than the measured car ownership for low-income residents as well as the proposed parking supply for these residents. Much of the housing located near the commercial businesses is for low-income occupants and there will be opportunities for shared parking of the commercial and residential parking supply.	continue to be used as a means to access the site. Transit stops are incorporated into the design of 8th Avenue SW. The design of 100th Street also anticipates that future transit service may also utilize this for future routes. These additional trips would not create a significant adverse impact to transit operations in the area. The revised roadway alignment and roadway configuration would provide shorter walking distance for crossing the site by providing more direct routing and sidewalk connections. Improved intersection alignments would provide more identifiable roadway intersections and crosswalks, allowing safer crossing for pedestrians at more regular intervals. Proposed traffic calming measures would contribute to slowing vehicular traffic, which would help accommodate non-motorized (pedestrian and bicycle) trips. No significant adverse impacts to non-motorized facilities or operations are expected to occur. There would be a slight increase in the potential for traffic accidents at study intersections proportionate to the increase in traffic due to trip generation. Approximately 3,000 parking spaces would be provided and would be more than adequate to meet the peak parking demand for the proposed redevelopment.	

Table 1.8-2
SUMMARY OF MITIGATION MEASURES

The following table briefly summarizes the potential mitigation measures. It is not intended to be a substitute for the complete discussion of mitigation measures provided in Section IV of the Draft EIS.

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
EARTH		
■ Proposed design elements to mitigate or minimize potential impacts due to development include stormwater facility design and implementation of best management practices. ■ The following general mitigation measures would be implemented for the Proposed Master Plan: • A temporary erosion and sedimentation control plan (TESCP) will be implemented. • Building areas underlain by fill and/or compressible peat could be supported by replacing these materials with structural fill. • On-site excavated native till, ice contact deposits and artificial fill soil consisting of silty sand and sandy silt with gravel may be considered for use as structural fill for placement during periods of dry weather. • Permanent slopes should be designed no steeper than 2 horizontal to 1 vertical. • Foundations and structures would be designed and constructed in accordance with the UBC standards for Seismic Zone 3. • A S_E soil profile should be used where liquefiable soils are present; a S_B soil profile should be used where till or medium dense to dense recessional outwash/ice-contact deposits are present. **Erosion Hazards** ■ A temporary erosion and sedimentation control plan (TESCP) detailing specific locations for engineered erosion control measures in erosion-prone areas will be developed. ■ The erosion control system will include redundancies or backup protection such that no single element of the system is relied upon to completely control erosion and sedimentation. The system will be regularly monitored and maintained.	■ Same as Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
■ The TESCP will be designed in accordance with the KCSWDM and other applicable King County and State of Washington standards. The plan will incorporate the following basic planning principles: • Schedule the grading and construction to minimize soil exposure. • Retain existing vegetation whenever feasible. • Vegetate and mulch denuded areas. • Direct runoff away from denuded areas. • Minimize length and steepness of slopes. • Keep runoff velocities low. • Prepare drainageways and outlets to handle concentrated or increased runoff. • Trap sediment on site. • Inspect and maintain control measures frequently. ■ The Proposed Master Plan and the Design Alternative Master Plan both include collection of runoff from roadways into a stormwater system to prevent uncontrolled runoff. ■ Tightline outfalls and energy dissipaters could be beneficial if included in the final design of stormwater facilities. **Steep Slope Hazards** ■ Typical mitigation of impacts in or near steep slope and landslide hazard areas resulting from project development should include the following: • Minimize concentration of surface water discharge on or near steep slopes or landslide hazard areas. • Intercept and direct surface water to a stabilized discharge outlet. • Reduce clearing to the minimum extent necessary. • Implement bench-cut slopes. • Constrain earthwork to dry weather. • Specifically designed structures to support or retain exposed soil in cuts or fills within steep slope areas. • Free-draining structural fill in roadway or utility corridor embankments to accommodate round water seepage.		

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
• Final designs for retaining walls and other structural designs must accommodate perched ground water and seepage. • Revegetate disturbed areas as soon as practicable. ■ Specific measures will include an approved TESCP to control runoff during construction. ■ Plans for regrading steep slopes within the development area would be reviewed by a licensed geotechnical engineer during the final design phase. ■ No fill will be placed on or near the crest of steep slope areas. ■ Run-off water will be routed away from steep slope areas, or erosion control measures will control water that could flow onto steep slopes. ■ Most of the steep slopes that lie within the development area will be regraded to more stable slope configurations. ■ Any steep slopes created as a result of grading (i.e., cut or fill slopes) and remaining after development will be assessed for appropriate buffers and setbacks. ■ Runoff from roadways, driveways and other impervious surfaces adjacent to steep slope hazard areas will be collected and routed to the stormwater system. ■ Buffers and setbacks for steep slope hazard areas would generally follow King County standards, except where variances are requested pursuant to the Demonstration Ordinance. Any variances will be supported by technical analysis. ■ Erosion/sedimentation control measures, stormwater runoff control will help prevent slope instability and erosion. ■ Special site-specific studies will provide data to mitigate or minimize significant impacts during the final design phase. **Landslide Hazards** ■ The Proposed Master Plan would include avoidance of landslide hazard areas, an approved TESCP as described above, buffers and building setbacks. ■ All runoff from new roadways within the development will be collected and routed to approved stormwater systems. ■ Specific design features will be based on special studies as needed.		

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
■ Runoff from roadways adjacent to landslide hazard areas would be collected and routed to the stormwater system. ■ Buffers and setbacks for landslide hazard areas would generally follow King County standards, except where variances are requested pursuant to the Demonstration Ordinance. ■ Surface water will be controlled during and post-development. ■ Steep slope and landslide hazard areas will be primarily avoided and protected with adequate buffers. ■ Special site-specific studies will provide data to mitigate or minimize significant impacts during the final design phase. **Seismic Hazards** ■ It may be feasible to mitigate for liquefaction by using pile supported foundations, using ground modification techniques such as ground densification or the installation of stone columns, or founding structures on mat foundations constructed on a structural fill pad.		
AIR QUALITY		
■ Use equipment and trucks that are maintained in good operational condition. ■ Require off road equipment to be retrofit with emission reduction equipment (i.e., require participation in Puget Sound region Diesel Solutions by project sponsors and contractors). ■ Implement restrictions on construction truck idling. ■ Locate construction equipment away from sensitive receptors. ■ Locate construction staging zones where diesel emissions won't be noticeable to the public or near sensitive populations such as the elderly and the young. ■ Spray exposed soil with water or other suppressant to reduce emissions of PM10 and deposition of particulate matter. ■ Pave or use gravel on staging areas and roads that would be exposed for long periods. ■ Cover trucks transporting materials, wetting materials in trucks, or providing adequate freeboard to reduce PM10 emissions and deposition	■ Same as Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
during transport. ■ Provide wheel washers to remove particulate matter that would otherwise be carried off-site by vehicles. ■ Remove particulate matter deposited on paved, public roads, sidewalks, and bicycle and pedestrian paths to reduce mud and dust; sweep and wash streets continuously to reduce emissions. ■ Cover dirt, gravel, and debris piles as needed to reduce dust and wind-blown debris. ■ Natural gas units should be required instead of wood-burning appliances, to ensure reduced emissions.		
WATER RESOURCES		
■ Implementation of temporary erosion and sedimentation control plan (TESCP) for temporary protection of exposed soils and receiving surface water bodies. ■ Construction of the diversion, including temporary stormwater ponds, if needed. ■ Adoption of a spill prevention plan to reduce any accident-related water quality impacts. ■ Diversion of a stormwater run-off from up to 11 acres of the Lake Garrett sub-basin LG-1 to the Duwamish River sub-basin DR-2. ■ Built green and low impact design concepts to enhance stormwater control and reduce development-related impacts. ■ A stormwater detention pond near the eastern site boundary. ■ A water quality facility in the vicinity of the proposed community facilities and in the northeastern portion of the redevelopment. ■ A water quality facility along the western site boundary. ■ A new storm drain conveyance system would be constructed and a storm drainage plan would be prepared to control and treat stormwater. ■ All stormwater control facilities would be sized to control stormwater to King County SWDM standards, or as approved through drainage adjustments. ■ Amendment of soils could potentially be implemented and could provide	■ Water quality and detention ponds would be larger since built green and low impact design concepts would not be used. ■ Construction of proposed stormwater facilities on the east side of the project would require construction of a large embankment within an east-west trending swale. ■ Lining of the ponds will likely be required to prevent seepage into embankment soils. ■ A portion of Lake Garrett drainage basin would not be diverted to the Duwamish River basin. ■ Stormwater drainage facilities would be designed and constructed according to King County design standards.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
some offset for stormwater detention requirements. ■ Phosphorous loadings to Lake Garrett would be reduced through implementation of the following design features, BMPs and mitigation measures incorporated in the proposal: 1. Basic water quality treatment; 2. Diversion of 25 percent of the site's contributing area to Lake Garrett out of the Lake Garrett basin (and thereby reducing phosphorus contribution from this area by 100 percent); 3. Reduction in fertilized lawn by 41 percent, plus additional removal through a proposed change in landscaping fertilization practices and the inclusion of soil amendments; 4. Plans for covered parking for 15 percent of the units where none now occurs; 5. Source control planning for multifamily building dumpsters by their placement under roofs; and 6. Control of construction runoff to avoid sediment phosphorus loading to Lake Garrett.		
PLANTS and ANIMALS		
■ Retain sensitive areas and buffers in open space tracts (at least 6 acres). ■ Implement standard temporary erosion and sedimentation control measures during construction. ■ Direct stormwater runoff from the project site to stormwater detention and water quality facilities to provide flow and duration control and to provide water quality treatment. ■ Implement "built-green" and low-impact design principles to limit effective impervious surface area and provide biofiltration of stormwater runoff. ■ Avoid introduction of noxious weeds or invasive species in developed and landscaped areas. ■ Landscape with native plant species to provide ground cover as nesting and feeding sites for birds and small mammals.	■ Same as Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
FISH RESOURCES		
■ Mitigation measures include BMPs to improve and protect water quality and benefit fish and their habitat. These include: • A roadside biofiltration BMP. • Flow controls to meet design criteria. • Water quality treatment facilities to meet design criteria.	■ Same as Proposed Master Plan.	■ No mitigation necessary.
ENERGY USE		
■ Incorporate energy conservation measures per current codes. ■ Coordinate construction of structural, mechanical, and electrical systems in multi-family buildings to reduce amount of material and effort needed to construct separate systems. ■ Conform design and construction with HUD energy consumption guidelines including proper siting of structures (north/south) and placement of trees for shade or windbreak. ■ Use computer controlled "smart" room thermostats. ■ Implement efficient placement of exterior and interior ambient lighting.	■ Same as Proposed Master Plan.	■ No mitigation necessary.
NOISE		
Construction ■ Construction noise could be reduced by using properly sized and maintained mufflers, engine intake silencers, engine enclosures, turning off idle equipment, and confining activities to daytime hours. ■ Construction contracts can specify that mufflers be in good working order and that engine enclosures be used on equipment when the engine is the dominant source of noise. ■ Stationary equipment could be placed as far away or shielded from sensitive receiving locations as possible. ■ Substituting hydraulic or electric models for impact tools such as jack hammers, rock drills and pavement breakers could also reduce construction and demolition noise.	■ Same as Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
■ Where feasible, equipment operators could drive forward rather than backward to minimize noise from back-up alarms. ■ Where feasible, noise from material handling could be minimized by requiring operators to lift rather than drag materials. ■ Where possible, contractors should make efforts to keep construction equipment greater than 100 feet from or to shield the nearest on and off-site residences and the school to comply with County construction noise limits and to minimize impacts to these sensitive receivers. **Operation/Site Sustainability** ■ Mitigation of project-generated noise is neither warranted nor proposed. However, some form(s) of noise mitigation would be required to reduce noise from traffic on SW Roxbury Street so that day-night sound levels at outdoor use locations and inside on-site residences would be within the levels considered "acceptable" by HUD, would otherwise meet HUD requirements for attenuation and/or would satisfy HUD's criteria for an exemption (24 CFR 51.105). ■ There are three basic ways to provide the noise attenuation required: noise barriers, site design modifications, or acoustical construction. Site planning has been used to locate most parks and outdoor spaces away from SW Roxbury. The effectiveness of noise walls at various locations was evaluated. A 6 foot noise wall is recommended at the west end of the site, along with special construction methods to reduce noise. At other locations along SW Roxbury Street, noise walls would only be effective for first floor units and is not recommended. Noise walls would generally create physical barriers that would conflict with HUD's HOPE VI program goals for physically integrating projects into their neighborhoods. Walls would also create security issues. Special acoustical construction techniques are recommended to attenuate noise in most locations. A site planning adjustment is also recommended for consideration to protect an outdoor use area.		

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
ENVIRONMENTAL HEALTH		
■ The King County Housing Authority (KCHA) will prepare a plan for the removal of the potential contaminants identified by the Phase I ESA. ■ Subsequent testing, if necessary, would be accomplished according to applicable State and Federal regulations. ■ Removal of asbestos-containing materials and lead-based paint will be completed by following an abatement plan in accordance with State and Federal guidelines. ■ If arsenic and/or lead contaminated soil is identified prior to issuance of a demolition permit, appropriate soil management practices will be utilized. • Fencing to restrict access to contaminated soil. • Mixing contaminated soil with clean soil to reduce concentrations of lead and/or arsenic. • Capping with clean topsoil or other clean materials to provide a barrier over the contaminated soil. • Containment within a completely enclosed on-site location to isolate contaminated soil from the environment. • Excavation and off-site disposal of contaminated soil.	■ Same as Proposed Master Plan.	■ If lead and/or arsenic in soil samples are detected at significant concentrations, similar mitigation measures as described above for the Proposed Master Plan would be required. ■ Structures where lead-based paint is detected would also require mitigation. Mitigation would consist of removing lead paint and properly disposing of it.
LAND USE and SOCIOECONOMICS		
Tenant Relocation Assistance ■ Implementation of the Proposed Master Plan would require the demolition of all 569 existing housing units and relocation of all residents. The HOPE VI Program requires that all residents receive relocation benefits as prescribed by the URA. ■ KCHA, with the extensive involvement of residents, has developed the *HOPE VI Relocation Plan Guide* (January 25, 2003) describing relocation benefits and choices. ■ All residents would be relocated off-site during the redevelopment. ■ Any resident wanting to return to Greenbridge who remains in good standing with KCHA would be offered the opportunity to return to a new unit in the redeveloped community.	■ Same as Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
■ Tenants will have the following relocation options from which to choose. • Move permanently from Park Lake Homes. Residents who do not want to return to the redeveloped community can elect to receive a tenant-based Voucher from KCHA or relocate to another KCHA owned public housing development. • Move during redevelopment of the site and return to a unit in the revitalized community. Residents who plan to return to the new community of Greenbridge may be relocated to another public housing community in the County or to any other KCHA-owned property. • Buy a home. Some residents may take this opportunity to explore purchasing a home. ■ KCHA relocation staff would provide the following assistance. • Conduct outreach and disseminate relocation materials. • Link residents with service providers in areas to which they relocate in order to ensure continuity of services. • Identify available housing options and assist with the search for comparable housing units. • Provide transportation and accompany residents to visit potential units. • Assist residents with applications for relocation benefits and/or rental applications. • Coordinate with moving companies. • Assist with the transfer of utility accounts. ■ The KCHA HOPE VI relocation team would assist residents with their moves, reimburse the resident for the cost of the move, and/or provide a fixed moving expense and dislocation allowance. ■ Many of the measures described above exceed the specific requirements of the URA.		

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Replacement Housing ■ The KCHA will use a combination of hard units and Section 8 vouchers for permanent and temporary relocation of the families at Park Lake Homes. ■ KCHA plans to replace three hundred (300) units on-site. The remaining 269 would be replaced off-site. ■ Off-site replacement units would be created through the allocation of project-based Vouchers to one of the following. • KCHA-owned, or managed, rental units that are not currently rent regulated. • KCHA-owned, or managed, rent-regulated units that provide the best opportunities for adequately-sized replacement units and that increase the dispersal of extremely low- and very low-income households outside of existing low-income neighborhoods. (In these instances, KCHA will dedicate unregulated units to replace the previously regulated units at comparable rent levels.) • New housing units developed by KCHA. • New housing developed by other nonprofit housing development agencies.		
ENVIRONMENTAL JUSTICE		
■ The proposed mitigation measures discussed under *Housing* address the short-term impacts resulting from demolition and construction.	■ Same as Proposed Master Plan.	■ No mitigation necessary.
HISTORIC and CULTURAL RESOURCES		
■ A qualified archeologist should implement a formal monitoring and discovery plan during construction. ■ In the event that historic or prehistoric cultural remains are exposed during construction, the State Historic Preservation Offices and concerned tribes should be contacted. ■ The King County Sheriff and Medical Examiners Office should be notified immediately of any accidental discovery of human remains. ■ If remains were determined to be Native American, all concerned tribes	■ Same as Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
would be contacted immediately.		
AESTHETICS, LIGHT and GLARE		
■ Changes in visual quality would be positive and would not require mitigation. ■ Potential lighting impacts from non-residential uses would be minimized through use of low-level sodium lighting and full cut-off lighting fixtures. ■ Reflective building materials would not be used for exterior building surfaces.	■ Same as Proposed Master Plan.	■ No mitigation necessary.
PARKS and RECREATION		
■ Park, open space and recreational facilities would be widely distributed across the project site. ■ Park, open space and recreational facilities would include a variety of amenities and uses. ■ Park and recreational facilities would be visible and accessible to Greenbridge residents and surrounding neighborhood residents. ■ Private open spaces, such as backyards, would be provided for most residents. ■ Adopt an agreement with the Highline School District for use of district facilities.	■ Same as Proposed Master Plan.	■ No mitigation necessary.
PUBLIC SERVICES and UTILITIES		
Fire/Emergency Medical Service ■ All new buildings would be constructed in compliance with King County Code. ■ All buildings would comply with accessibility standards for people with disabilities. ■ Construction of speed bumps, steep curves, and steep grading associated with vehicle access should be avoided. ■ Fire hydrants should be no more than 150 feet from community and	■ Same as Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
commercial structures and no more than 350 feet from other buildings. ■ Tree heights should be considered to ensure that fire apparatus vehicles may travel unobstructed. ■ Access roads should be a minimum of 20 feet in width. ■ Any secured areas (i.e., buildings or gates) would require provision of a "knox box". **Police Service** ■ During construction, security measures would be implemented to reduce potential criminal activity, including on-site security surveillance, lighting, and fencing to prevent public access. ■ Street layouts, open space, and recreation areas would be designed to promote visibility for residents and police. ■ Parking areas would be lit with security lighting to discourage theft or vandalism. ■ Physical security systems would be installed, where appropriate. ■ The King County Sheriff's Office, Greenbridge residents, KCHA management, and community service agencies would coordinate and implement management principals and policies to improve on-site security. **Schools** ■ No mitigation measures are necessary or proposed. **Community Services** ■ The scheduling of construction activities during periods of typically inclement weather would be taken into account in order to reduce impacts on community services. **Utilities** ■ All utility service line work would be conducted in compliance with King County and Washington State utility requirements. ■ Design of the proposed water distribution facilities would also comply with criteria established in the Seattle Public Utilities Design Standards, King County Water District No. 45 Standards for Constructing Extensions to		

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
the Water System. ■ The proposed sewer system would be designed and constructed per the criteria established in the Southwest Suburban Sewer District Comprehensive Sewer Plan (1999) and the Southwest Suburban Sewer District Developer Project Manual (2002). ■ Most electrical and telecommunication cables would be installed underground to minimize disruption to the natural environment. ■ Hydraulic modeling of the entire water distribution system would be conducted prior to building permit issuance to verify that fire flows are adequate. ■ The goal of diverting 80 percent of eligible construction waste from the landfill would be used as a target.		
TRANSPORTATION and PARKING		
■ King County would evaluate the need for a Construction Transportation Plan to mitigate potential impacts of construction on the local street system. The plan would include a temporary detour plan, outlining planned street closures and detour routing, would be developed; and coordination with King County and City of Seattle for street closures and detouring would also be required. <u>Roadway and Intersection Mitigation</u> ■ No study intersections would degrade to a LOS of E or worse as a result of project traffic. Thus, no level of service related mitigation is anticipated to be necessary. **Proposed Mitigation Measures** 8th Avenue SW/SW Roxbury Street The applicant has proposed, and King County Department of Transportation and the City of Seattle have concurred with the following mitigation measures to address safety concerns: ■ Restrict northbound right turns to not allow right turn on red; ■ Add a leading protected phase for westbound left turn; ■ Provide advance warning measures for eastbound traffic.	■ Construction mitigation would be the same as the Proposed Master Plan. <u>Roadway and Intersection Mitigation</u> ■ No study intersections would degrade to LOS of E or lower as a result of the Design Alternative Master Plan. Thus, no level of service related mitigation is anticipated to be necessary. ■ Mitigation would be the same as for the Proposed Master Plan.	■ No mitigation necessary.

Table 1.8-2
SUMMARY OF MITIGATION MEASURES (continued)

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
King County Department of Transportation and the applicant have also agreed to a monitoring and evaluation program to address the potential need for additional improvements at the 8th & Roxbury intersection or within the corridor in the future. The need for or type of improvements, if any, cannot be identified with reasonable certainty at this time. King County will monitor intersection operation and accidents on an annual basis. At such time as 2/3 of a representative mix of Greenbridge's approved housing units are constructed and occupied, the County will determine whether additional improvements are warranted. Improvements could be corridor wide and/or multijurisdictional. The applicant will be responsible for a proportionate share of future improvements related to Greenbridge. **Other Potential Mitigation Measures** Other potential mitigation measures identified in this Final EIS include: ■ Construct westbound left-turn lane, symmetrically with an eastbound left-turn lane or asymmetrically; ■ Take down the vertical crest curve to remove sight distance limitations; ■ Move the southern intersection approach further to the east; ■ Prohibit westbound left turns onto 8th Ave SW from SW Roxbury Street; ■ Convert SW Roxbury Street to one lane in each direction with a center turn lane; ■ Convert SW Roxbury Street to include two westbound through lanes, one eastbound through lane and a center turn lane; ■ Reduce speed on SW Roxbury Street.		

1.9 MAJOR CONCLUSIONS

No significant unavoidable adverse impacts are anticipated for all elements of the environment analyzed in this EIS. The Proposed Master Plan would generate impacts to various elements of the environment that can be mitigated so as to not be significant.

Existing traffic noise levels on SW Roxbury Street, which affect the Greenbridge site, exceed levels generally considered desirable by HUD guidelines. Noise control measures (site planning, noise attenuation, or construction techniques) will be required to reduce noise from traffic on SW Roxbury Street so that day-night sound levels at outdoor use locations and inside on-site residences, would meet HUD requirements for attenuation, and/or would satisfy HUD's criteria for exceptions (24 CFR 51.105).

1.10 AREAS OF CONTROVERSY and ISSUES OF CONCERN

Some consider the Hope VI program and implementing projects to be controversial. Similarly, land use changes, socioeconomic issues, and housing displacement/relocation associated with redevelopment, may also be viewed as controversial. Relevant land use, socioeconomic, and housing issues are discussed in Section 4.9 of the Draft EIS.